

R E P O R T R E S U M E S

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THE EFFECTIVENESS OF A MODIFIED COUNSELING PROCEDURE IN
PROMOTING LEARNING AMONG BRIGHT UNDERACHIEVING ADOLESCENTS.

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THE PROBLEM WAS TO DETERMINE IF SIGNIFICANT DIFFERENCES
IN THE SCHOLASTIC ATTAINMENT OF BRIGHT UNDERACHIEVING
ADOLESCENTS COULD BE INDUCED BY A SHORT-TERM SMALL GROUP
COUNSELING PROCEDURE. MAJOR OBJECTIVES WERE TO DETERMINE THE
EXTENT TO WHICH A GROUP OF CAPABLE BUT UNDERACHIEVING
ADOLESCENTS CAN IMPROVE THEIR ACADEMIC STANDING BY EXPOSURE
TO A COUNSELING SETTING WHEREIN THEY MAY DIAGNOSE THEIR OWN
"FAILURES" AND PLAN WAYS OF REPAIRING THEIR OWN
"DEFICIENCIES," AND TO DETERMINE THE EXTENT TO WHICH THE
COUNSELING PROCESS CAN BRING ABOUT A MORE POSITIVE ATTITUDE
TOWARD STUDY IN A GROUP OF CAPABLE BUT UNDERACHIEVING
ADOLESCENTS. THE EXPERIMENT INVOLVED 12 BRIGHT
UNDERACHIEVING, NINTH GRADE BOYS. BIOGRAPHICAL DATA, INTEREST
SCORES, AND PERSONALITY INDICES WERE GATHERED ON EACH
INDIVIDUAL. THE EXPERIMENTER THEN PREPARED 12 DISGUISED CASE
STUDIES, EACH CHARACTERIZING A MEMBER OF THE GROUP. IN ALL
CASES, ONE OF THE PROBLEMS TO BE CONSIDERED WAS A LACK OF
SCHOLASTIC ACHIEVEMENT. THE COUNSELING CONSISTED OF A SERIES
OF SIX SESSIONS DURING WHICH EACH GROUP DISCUSSED THE CASES.
IT WAS THE RESPONSIBILITY OF THE GROUP TO ISOLATE THE
PROBLEMS IN EACH CASE AND TO SUGGEST POSSIBLE WAYS OF
RESOLVING THEM. BY COMPARING THE CHANGES IN SCHOOL
ACHIEVEMENT AND IN ATTITUDE OCCURRING IN A CONTROL GROUP, THE
INVESTIGATOR WAS THEN ABLE TO DETERMINE THE EFFECTS OF THIS
COUNSELING PROCEDURE AND TO SEE WHETHER OR NOT THE
PARTICIPANTS WERE ABLE TO TRANSFER THEIR LEARNINGS TO THEIR
OWN SITUATIONS. (AH)

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CHAPTER I

INTRODUCTION

The student of outstanding capacity who fails to achieve academically at a level reasonably commensurate with his ability presents a challenge to educators and counselors. The number of such students is small; in the

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National Study of High School Students and Their Plans, this category was the

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Factors which Differentiate High-Ability Students

One approach to the first question is to identify a selected group of students who will serve as a basis for comparing the high-ability group of students, the intellectual and the experimental. The groups are then compared with respect to any number of variables proposed or being proposed. The distinguishing between the two groups, and the significance of the differences between the scores on these variables is assessed. Using the results obtained from the A. S. E. Psychological Examination as indices of academic potential, and grade point averages at the end of the first semester of college work as the criterion for academic success, four identified students which differentiated themselves from non-achievers (8).

Despite finding a greater incidence of extreme underachievement among this students, we also found that the secondary school records of the under-

CHAPTER I

INTRODUCTION

The student of outstanding capacity who fails to achieve scholastically at a level reasonably commensurate with his ability presents a challenge to educators and counselors. The number of such students is sizable: in the National Study of High School Students and Their Plans, Cole estimated that the United States is wasting its intellectual resources at the rate of 200,000 eighteen-year-olds a year (5). Because it is of prime interest to society in general that the potentialities of these well-endowed youth be utilized, increasingly more concerted and systematic attempts are being made to understand the student who possesses intellectual capacity of high order but whose academic adjustment is of mediocre or inferior quality. Investigators seem to have concerned themselves with two more or less related aspects of the problem: the study of (1) the factors which differentiate underachievers from overachievers; and (2) conditions which will stimulate underachievers to strive for academic success.

Factors which Differentiate Underachievers from Overachievers

One approach to the first question is to establish a criterion for intellectual capacity which will serve as a basis for matching two different groups of students, the successful and the unsuccessful. The groups are then compared with respect to any number of variables suspected of being crucial in distinguishing between the two groups, and the significance of the differences between the scores on these variables is examined. Using the results obtained from the A. C. E. Psychological Examination as indices of academic potential, and grade point averages at the end of the first semester of college work as the criterion for academic success, Dowd identified several factors which differentiated achievers from non-achievers (8).

Besides finding a greater incidence of extreme underachievement among male students, he also found that the secondary school records of the under-

achievers tended to be lower than those of the overachievers. Reading comprehension was at a lower level and the median number of study hours per week was less for underachievers than overachievers. From the Whenn Study Habits Inventory, Dowd conjectured that the dissatisfaction of non-achievers with teachers and courses might be creating a negative barrier detrimental to prospects of subsequent achievement. Future success seemed penalized still more by the observation that the occupational goals of the non-achievers were not consonant with their measured interests. In view of the differences observed between achieving and non-achieving college freshmen, Dowd concluded that the factors that depress achievement antecede college years.

Among high school pupils, some of the factors which seem to account for the gap between potential and actual scholastic achievement have been determined by Bond (4). The reactions of high school pupils selected from grades ten through twelve to thirty-nine possible factors which might impair scholarship were indicated on a five point scale. Among high ability pupils, the first reason assigned for not obtaining better marks was the fact that pupils spent a disproportionate share of their energy on the subjects they liked best. A cluster of interrelated factors which inhibited scholarship included failure to distribute time adequately, difficulty in settling down to study, inability to improve work habits, and a tendency to permit other interests to disturb study.

These factors which adversely affect the scholarship of high school pupils are repeated in somewhat parallel fashion in the M. M. P. I. items which comprise the underachievement scale constructed by McQuary and Truax (19). On the other hand, these traits are in striking contrast to the basic seriousness of purpose and the rejection of the frivolous and diversionary which Gough found characteristic of academic achievers in high school; achieving students possessed good study habits and a sense of academic effectiveness (11). An immediate implication of such findings seems to be the need for helping underachieving pupils to derive

value from working in unfamiliar fields and from performing difficult and sometimes distasteful tasks (4).

Apparently, the underachiever's lack of persistence when faced with a dull, routine or hard task and his proneness to subordinate study to extracurricular activities of all kinds goes unnoticed until high school or college. It seems probable that this absence of a habit of study may develop gradually during the elementary years. Then the bright students who have failed to learn how to work at the elementary level find the standards of their secondary schools and the competition of other students of superior ability too overwhelming. With genius calibre, these effects may be delayed. It was when they reached college level that some of Terman's gifted subjects who failed in studies explained that "in high school they had made high marks without doing any serious work and that in college they underestimated the amount of work necessary to secure passing grades" (30). Possibly elementary school teachers have unwittingly contributed to poor study habits by their unqualified acceptance of the bright child's successful accomplishment of work commensurate with his life age without realizing that such accomplishment is far below the bright child's ceiling level. Such an interpretation is strengthened by the observation that elementary school teachers designate "teaching dull children" as their primary professional problem, whereas "teaching bright children" is ranked problem number fourteen (2).

"Teaching bright children" should probably be understood as allowing for more rather than less freedom to satisfy their intellectual curiosity and to exercise their intellectual powers. Too much "steering" evidently militates against academic success. When Jones compared superior students to probation students matched for ability, a significantly larger number of probation students said their home life was substantially dominated and that study time was directed

by parents (15). If these attitudes transfer to the classroom or the counseling situation, the inference may be that with bright children a student centered or client-centered setting may provide the optimal conditions for learning.

Motivating Underachievers to Learn

In studying this second aspect of the problem of underachievement, how to motivate persons of high ability to actualize their intellectual potential, much attention has been focused on the contribution which can be made by the classroom teacher. Numerous studies have investigated the relative merits of programs which allow for acceleration (22), special grouping (13), or enrichment of the curriculum (1). Initially such attempts to modify the teaching program were carried on at the elementary school level. But recognizing that students who had benefited from stimulating programs in the early school years would be let down if high school or college turned out to be generally enervating, educators continued their efforts to motivate bright students at higher levels, and to better the articulation between high school and college by means of the Advanced Placement Program, the Early Admission (to college) Program, Independent Study Programs, and many others (10).

Not all bright underachieving students have responded to the challenge offered by such programs, however. Consequently the effectiveness of other approaches, such as guidance and counseling, for improving academic performance has been examined. Few such studies have confined their interest to the bright child exclusively, but, in all likelihood, those influences which have led to improved school performance for students in general probably hold some benefits for the child of better than average ability who is underperforming. That the latter need some assistance is suggested by records examined by Terman (29). Among his superior students, it was discovered that there were many cases in which a poor record in school was partly the result of insufficient guidance. For most

persons, experimental findings reveal that guidance and counseling are profitable experiences. Studies carried on by Rothney (25) in guidance, and by Williamson and Bordin (31) in counseling support this view.

Among Massachusetts high school students of equal intelligence, half of whom were given guidance and half of whom were unguided, twenty-seven percent of the guided group became honor students while only ten percent of the unguided received such distinction in high school. After graduation, fifty-three percent of the guided group and less than thirty-six percent of the unguided group were admitted to institutions of higher learning (25).

To be effective, Williamson and Bordin maintain that counseling must be continuous, directed, and based on adequate data about the student. In a study conducted at the University of Minnesota, these investigators (31) tested the hypothesis that students who received "organized" counseling would achieve a better degree of adjustment than that attained by students who did not receive organized counseling but who may have been counseled by friends or faculty. The two groups, consisting of 384 students each, were individually paired on the variables of class, age, sex, type of high school, high school percentile rank, college attitude test scores, and cooperative English scores.

A year after the completion of counseling, independent judges, utilizing the complete counseling data supplemented by a follow-up interview, rated the degree of adjustment on a five point scale of adjustment, and the degree of cooperation with the counselor of the counseled students or, in the case of the non-counseled group, the extent to which the students had maintained their plans stated upon admission to college.

The comparison of the groups yielded the following results. Students who had received "organized" counseling were likely to be better adjusted; plans arrived at independently were followed through more consistently than those arrived at on the advice of the counselor, but the latter were more likely to

yield satisfactory results; significant differences in honor point ratio were found in favor of the counseled group in the first quarter when the counseling was evaluated in this experiment was completed (12).

Background and Statement of the Problem

To discover still more optimal conditions for promoting learning and improved attitudes toward school among bright underachieving adolescents, the present study was undertaken. It is an outgrowth of earlier attempts to help capable junior and senior high school pupils who had been referred to the Regis Child Clinic because their school achievement had not been commensurate with their capacity. For such referrals, individual counseling on a weekly basis for a period of four to six weeks had been offered. Prior to the first counseling session, life history data, personality tests and interest measures provided factual information which constituted core material for a disguised case study. During the initial counseling session, the disguised case, with its problems analogous to those of the client's, was presented for consideration. During subsequent meetings, the client was encouraged to help resolve the problems involved in the case. Eventual solution of the client's own problem was interpreted as an indication of the fact that he had attained insight into the similarities existing between the disguised case and his own, and had applied solutions proposed for the former to his own life situation.

It was conjectured that still more beneficial outcomes would occur if this procedure was modified for use with small groups of bright underachieving adolescents. The rationale behind such expectations revolved around the more salient findings of group dynamics coupled with characteristic traits of young adolescents - an increasing capacity for rational deliberation, a need for assurance that value systems conform to those of peers, need for participation, and a desire to give expression to personal opinion.

To provide the most favorable conditions for the satisfaction of these capacities and needs in the bright underachieving adolescents, the appositeness of a predominantly non-directive counselor orientation was explored. However, it seemed unlikely that young adolescents would initiate discussion about personal problems such as their own scholastic mediocrity or failure (14). The extreme self-consciousness and insecurity which they manifest in unstructured group situations would militate against this. Therefore, the counseling situation was modified; attention was focused on disguised cases which were more or less analogous to each participant's life situation. It was hoped that this task orientation would lessen the participant's likelihood of becoming too ego-involved in a case, and consequently a more objective and realistic contribution to the solution of the problem could be expected. Solutions arrived at were expected to be effective in bringing about better academic performance and improved attitudes toward school because recent research has given evidence, not only that solutions determined by groups are more effective than those determined by individuals, but also that group decisions reached by participant discussants are learned more rapidly (32).

The hypothesis that bright underachieving adolescents derive benefit from such a modified counseling experience would be supported if pre- to post-counseling changes on measures of academic achievement and attitude toward school showed significant improvement for counseled groups when compared with groups which did not receive counseling.

To those boys with grades which were average (70%) or below the California Test of Personality (C.T.P.), was administered and boys with extreme scores were eliminated.

If either the self-adjustment or the social adjustment scores on the California Test of Personality were below the 40th percentile (7), personality traits were considered deviant enough to interfere with the successful pursuit of studies. Since this research was concerned with those bright underachievers

CHAPTER II

EXPERIMENTAL PROCEDURE

To test the hypothesis that bright underachievers would make positive gains if exposed to a small-group counseling situation wherein the leader assumed a non-directive role and the other participants centered attention upon the solution of a disguised case, a sample population of ninth grade boys was used for this study. Since the one common denominator among underachievers seems to be that "boys greatly outnumber girls" (6, p. 132), the selection of male subjects seemed practical. Ninth graders were chosen because at the beginning of their high school years they are in a transitional stage which has important outcomes for their eventual success and satisfaction as adults.

To procure these subjects, the screening process was begun during mid-October 1956. Seventeen high schools within relatively easy commuting distance of the Regis Child Clinic were identified as possible ones from which subjects might be obtained. A form letter was drafted describing the study in general terms and requesting the cooperation of the school. These letters were sent to the school principals and favorable replies were received in every instance.

At the close of the first school marking period, the second week of November 1956, the experimenter obtained from the office files of each of these schools the first quarter academic record of each ninth grade boy with an I. Q. in excess of 125 on the California Test of Mental Maturity which had been administered the previous September. To those boys with grades which were average (75%) or below the California Test of Personality (C.T.P.). was administered and boys with extreme scores were eliminated.

If either the self-adjustment or the social adjustment scores on the California Test of Personality were below the 40th percentile (7), personality traits were considered deviant enough to interfere with the successful pursuit of studies. Since this research was concerned with those bright underachievers

who were well-adjusted, relatively speaking, on those aspects of personality usually measured by objective tests such as the C. T. P., boys with low scores were not able to satisfy the selection criteria. The boys who did meet the criterion of average personality adjustment as measured by the C. T. P. represented fifteen different high schools, and the number of boys representing each high school varied from one to nine.

From this group, the twenty-four boys were selected who showed the greatest discrepancy between ability and achievement. By ranking subjects on the basis of I. Q. and also on the basis of the academic average obtained at the end of the first marking period, the subjects whose achievement ranked markedly lower than their ability could be identified.

The experiment was designed so that not more than four subjects should come from any one high school; actually the discrepancy scores were such that no school had more than four boys numbered among the twenty-four most marked under-achievers. These twenty-four boys were arranged in six sub-groups of four each; all boys from the same school were allocated to the same sub-group. One control and one experimental subject was drawn from each of the six sub-groups composed of four subjects, and a counterbalanced design for placement of the subject in the experimental and control groups was followed. The same process was repeated to obtain a second group of six experimental and six control subjects.

Within the month following the selection of the experimental subjects, appointments were made at the Regis Child Clinic for each of the experimental members. At this time, each subject was interviewed by the principle investigator. Although the length of each interview varied from subject to subject, the meetings took approximately one hour. During this time, a structured interview was conducted to obtain biographical data which might be considered helpful in explaining a boy's scholastic underachievement. For the most part,

items incorporated into the Biographical Inventory tapped those aspects of one's life which other research workers have found to be discriminating in the ability to differentiate between scholastic achievers who are at opposite extremes. Each subject's description of his home and school life, his use of free time, his outstanding earlier memories as well as plans for the future were sought. General open-ended questions in these broad areas were first put to the subjects. They responded with varying degrees of elaboration; in those cases where interviewees tended to be reticent, more specific questions were asked in order to elicit the information necessary to complete the Biographical Inventory.

After the interview, the Kuder Preference Record, Vocational Form CH, was administered to each experimental subject. Responses obtained from this instrument, in addition to results obtained from the Biographical Inventory, the California Test of Personality, and the first term ninth grade academic record constituted core material for the writing of disguised case studies.

Before writing the disguised cases, it seemed desirable to spell out as clearly as possible the manner in which the content of each case was to be determined. Because the disguised cases were being used to focus attention on the problem of underachievement, they were to provide the stimuli for discussion during later counseling sessions. Since any insight into the similarities existing between an experimental member and a particular disguised case was induced by a consideration and subsequent discussion of the disguised case, and since this insight, according to the hypotheses, was to foster both an improved attitude toward school and also a higher grade point average, it seemed advisable to be as operationally explicit as possible. By so doing, the disguised case, as an experimental device, would not only satisfy the scientific criterion of repeatability, but it would also suggest possible ways of constructing other cases, and of adding to them or deleting various aspects from them, depending

upon the investigator's reasons for using such an experimental tool. Moreover, in the present study, established criteria for writing the disguised cases would represent an attempt to hold this variable constant from subject to subject. An effort in this direction seemed important, since improvement in an experimental subject's school grades and/or school attitudes was hypothesized as due, in part, to the subject's ability to identify with the disguised case earmarked for him. If the disguised cases were not parallel, marked differences in the extent of change among experimental subjects could be interpreted as attributable to differences in the cases disguised for them. Although such differences were not to be analyzed directly, indirectly they could obscure the interpretation of the results. This would happen if positive and negative gains among experimental subjects so counteracted each other as to produce the net gain of zero which was predicted for the control subjects. Non-significant results such as described might still occur, but because of the operational similarity among the disguised cases, non-significant differences between experimental and control subjects might be more plausibly attributed to the failure of the disguised cases in conjunction with the counseling process to effect the desired changes.

On the other hand, the extent to which similarity departed from identity undoubtedly varied from case to case, since no rule of thumb procedure for every item incorporated into the disguised case was possible. This was due mainly to the fact that the relative emphasis accorded to different items by different subjects in the various tests could not be ascertained.

Basic criteria for writing the disguised cases were arrived at by the primary investigator and two assistants after joint consideration of the studies which have been reported on the bright student's academic achievement in high school. A survey of the literature suggested that negative attitudes toward family or teacher or peers, undesirable personality traits, limited interests,

or a lack of goal-directed behavior might not only be concomitant, but even, causal factors associated with underachievement. With achievers, on the other hand, the school subjects which they liked best were, for the most part, the subjects which unselected children found the most difficult. The vocations toward which they were striving ranked fairly high in the occupational hierarchy with respect to the intellectual demands they make, and the aspirations tended to be consonant with their aptitudes and interests. The diversity of their activities, the unusual quality and quantity of their reading, their superior personal adjustment and somewhat better social adjustment have been remarked (6, p. 134).

In the present study these contrasting descriptions seemed to deserve consideration in the preparation of the disguised cases of the experimental subjects, since they seemed to touch upon most of the directing influences in the life of the young adolescent. If these bright underachievers were described in terms of how they affect and are affected by members of their home, school, and/or peer group, and if they also had some of their own ambitions, interests and personality traits highlighted, the resulting word picture might so approximate a particular subject's view of himself that he would identify with the case. Such was the *raison d'être* for the disguised cases: it seemed that any suggested plans for improving academic status which might be proposed during the counseling sessions would most likely be accepted, introjected and acted upon by the subject who looked upon the case under discussion as one which resembled his own life situation.

Before writing the disguised cases, positive and negative statements as well as information-giving items about home factors, school history, peer group status, personality traits, interest and aspirations were culled from the subject's responses to the California Test of Personality, the Kuder Preference Record, and the Biographical Inventory. These statements were incorporated into a disguised case which was earmarked for the particular subject whose responses

had been culled. Because the attainment of each subject's post high school goal was being seriously threatened by scholastic underachievement, this general problem was given prominence in every case. All cases were approximately 650 to 700 words in length. To preserve objectivity, the writer adhered closely to the standard wording of test items. To unify the core material provided by these items and to focus the problem of each disguised case on academic underachievement, transitional sentences, clauses or phrases had to be inserted, but these were kept at a minimum. An illustrative case is presented in Appendix A.

Since the counseling sessions which revolved around the discussion of disguised cases were expected to effect, not only a change in school grades, but also an improved attitude toward school, it was necessary to select valid and reliable measures which would yield quantifiable indices of attitude change. The investigator desired that all estimates of attitude should come from the individuals themselves, since estimates made by an observer of an individual's attitude tend to be unreliable and easily distorted. On the other hand, expressions of attitude by the individual can be rated by independent judges in a highly reliable manner once criteria for judging these expressions have been established. A second concern of investigators who attempt to assess attitudes has been remarked by McNemar; attitude researchers tend to "measure" a concept by applying a particular label to a set of questions without concern for other operational definitions of the same concept. Admittedly, attitude toward school is a global concept; consequently, there is a proliferation of operational definitions (17). However, the attempt was made, logically, to specify those aspects of attitude toward school which were of interest to the investigator. In this study attitude toward school included attitude toward studies, teachers, school effort, or future goals and behavior which put demands on intellectual activity.

Three different means of measuring the attitude were used. Two of

these measures, the Sentence Completion Test (S.C.T.), and the miniature Q-sorts were administered before and after the counseling sessions to the subjects in both the experimental and control groups; the third measure was used with experimental subjects only. The incomplete sentences included items used by Lindgren, Howard, and Rotter (26) and additional stems originated by the author. By thus culling items from various sources, stems designated as "specific" to attitudes toward the school situation were retained while "general" stems could be eliminated. For example, "School" ... or "When I study" ... could be considered "specific", whereas "Sometimes" ... or "I wish" ... would be considered "general". With respect to the operational definition of attitude toward school mentioned above, an item such as "My teacher" ... would reflect attitude toward teachers; "My algebra class" ... or "English class" ... would reflect attitude toward studies; "I feel that homework" ... or "Before examinations" ... would reflect attitude toward school effort or future goals which put demands on intellectual activity.

All the subjects participating in this study were scholastic under-achievers at the outset; hence attitudes toward school were probably those which characterized academic underachievers. As a result of the counseling process, however, not only higher grade point averages were expected, but also, as a logical concomitant, the attitude toward school of the experimental subjects was expected to approximate more closely that of academic overachievers. To assess the extent to which experimental subjects' attitude toward school shifts from that of a typical underachiever to that of a typical overachiever, a series of miniature Q-sorts were administered to all experimental and control subjects before the first counseling session and at the conclusion of the final counseling session. Each miniature Q-sort was composed of six statements which the respondent ranked in order from the one most characteristic of himself to that least characteristic of himself. Two statements in each Q-sort were known to be highly

discriminative for efficient students and two for inefficient students; the remaining two statements were non-discriminating. The discriminating statements were those which prior factor analyses had shown to have high positive or negative loadings on either of the two factors, Factor I descriptive of diligent students, and Factor II descriptive of ineffective students. The most and least characteristic statements about modes of study appearing in these factor arrays are achieved in simple structure and are validated very considerably by the objective measures of over- and underachievement. The respective study habits represented by the two factors themselves, however, are not in a bipolar relationship; Stephenson is careful to note that overachievers are not just the precise opposite of underachievers, and his inference is that these same two distinct factors will be found extensively among all students (23).

In a third measure of attitude change, only experimental subjects were used because the verbal content of the counseling sessions provided the attitudinal expressions which were to be converted into quantifiable indices of change. A commonly used measure of change following upon individual counseling is that of comparing verbalizations occurring early in the counseling process with those which occur later. In cases judged to be successful, more positive feelings and fewer negative feelings are expressed at the end of counseling than at the beginning (3); positive statements about self increase and negative statements decrease over a series of counseling interviews (24); not only expressions about self but also expressions about other people tend to become increasingly more positive in the process of non-directive counseling (27).

For the most part, wherever measures of feelings about self or others have been prominent considerations for a particular investigator, the aim of the counselor has been to assist the client in his attempt to resolve some emotional problem. In this study, however, the groups counseled were composed of relatively

stable individuals according to the C. T. P. results. For this reason, rational processes more than effective processes were expected to characterize the counseling sessions. Consequently all statements about school which reflected an experimental subject's feelings or ideas about studies, teachers, and/or future behavior directed toward scholastic pursuits were identified by the investigator and two assistants. The statements made by each boy during the first half of the counseling process, i.e., during the first three counseling sessions, were pooled as were also the statements made by each boy during the second half of the counseling process. If counseling fostered an improved attitude toward school, significantly more positive statements about school were expected to appear during the last half of the counseling sessions than during the first half.

The counseling sessions took place during the months of February and March 1957 at the Regis Child Clinic. The first experimental group met for six successive Saturdays, February 9 through March 16. The second experimental group met for six successive Thursdays, February 14 through March 21; bad weather necessitated the postponement of this experimental group's first meeting from Thursday February 7 to Thursday February 14. Irregularities due to absence also occurred: an absence was recorded for the fourth counseling session for an experimental member of the group which met on Saturdays; an absence from the third counseling session was recorded for an experimental member of the group which met on Thursdays.

At each counseling session, the group members were given a copy of the case under discussion, a case resembling the life situation of one of the group members. The members of the experimental group were allowed fifteen minutes to read the case and consider possible solutions for the major problem. There were to be no oral comments at this time, but notes could be written down. At the end of the fifteen minute period, the counselor made it clear to the subjects that they

were free to use the next hour to discuss possible solutions to the central problem of the disguised case. The ensuing discussion was electrically recorded.

The "one hour" counseling session was never less than 55 minutes nor more than 65 minutes. Once 55 minutes was up, the counselor tried to bring the session to an end. This was less readily accomplished when the boys were involved in an issue, but after 65 minutes the tape recorder was turned off.

It should be remarked that the experimental members did not know that the case being discussed resembled the real life situation of one of the participants. Rather, they were told that, in another part of the country, a teen-age jury was successfully resolving court cases(23) and that similar confidence was being placed in their ability to resolve school problems.

For the most part, the counselor's role was non-directive. It was felt that this approach would give maximum recognition to the more characteristic traits of young adolescents and would afford ample opportunity for free expression. The counselor maintained this defined role by structuring the situation so that the responsibility for the solution of the cases remained with the group members. In large measure, one accomplishes this by means of responses which Bales classifies under category six in interaction process analysis. This category includes responses which give orientation, information, repeat, clarify, confirm. In making such responses, the counselor shows an understanding of the subject or something the subject has said by "restating, reporting the essential content of what he has said, reflecting the content or feeling back to him, rephrasing, accepting and clarifying the feeling involved, without, however, resorting to interference or interpretation beyond that given by the subject himself. It includes putting the ideas, feelings, or affective tone in somewhat clearer or more recognizable form, with the intent of aiding the subject in the formulation or reformulation of his problem, but any inference, if present, must be

minimal" (2, p. 185).

At the conclusion of the last counseling session, the SOT and the Q-sorts were again administered to all subjects. At the end of the 1956-1957 academic year, the final school grades of the experimental and control subjects were obtained from the office files of the schools participating in the study.

Since the distributions tended to be normal and there were no marked differences among the groups for the two units groups. Moreover, at the beginning of the experiment it was assumed that the null hypothesis held for all groups with respect to ability and achievement. The F values obtained when these assumptions were tested are summarized in Table I.

TABLE I

Analysis of Variance of the I. Q. Scores of 4 Groups of 8 Subjects

Source of Variation	Sum of Squares	df	Mean Square	F
Between groups	79.22	3	26.41	1.42*
Within groups	247.04	28	8.82	
Total	326.26	31	10.52	

* $F > .05$

Since the variability between groups and the variability within groups did not yield a significant F value, the difference between the groups in intelligence can be attributed to chance. Similarly, the differences between the groups in first quarter marks in grade nine were not significant as indicated by an F value of .05 (Table II).

TABLE II

Analysis of Variance of the Average Grades of 4 Groups of 8 Subjects at the end of the first quarter in Grade Nine

Source of Variation	Sum of Squares	df	Mean Square	F
Between groups	3.67	3	1.22	.05*
Within groups	282.04	28	10.07	
Total	285.71	31	9.22	

* $F > .05$

CHAPTER III

STATISTICAL ANALYSIS AND INTERPRETATION OF THE DATA

For each of the four groups of six subjects who participated in this study, the I. Q. scores obtained on the C. T. M. M. and the average school grade obtained at the close of the first quarter in grade nine were studied by a simple analysis of variance technique. Although each group was small, this procedure was feasible since distributions tended to be normal and there were no marked differences among the sigmas for the separate groups. Moreover, at the beginning of the experiment it was assumed that the null hypothesis held for all groups with respect to ability and achievement. The F values obtained when these assumptions were tested are summarized in Table I.

TABLE I

Analysis of Variance of the I. Q. Scores of 4 Groups of 6 Subjects

Source of Variation	Sum of Squares	df	Mean Square	F
Between groups	38.22	3	12.74	1.46*
Within groups	237.54	20	11.88	
Total	275.76	23	11.99	

* $P > .05$

Since the variability between groups and the variability within groups did not yield a significant F value, the differences between the groups in intelligence can be attributed to chance. Similarly, the differences between the groups in first quarter marks in grade nine were non-significant as indicated by an F ration of .05 (Table II).

TABLE II

Analysis of Variance of the Average Grades of 4 Groups of 6 Subjects at the end of the First Quarter in Grade Nine

Source of Variation	Sum of Squares	df	Mean Square	F
Between groups	3.42	3	1.14	.05*
Within groups	428.34	20	21.42	
Total.	431.76	23	18.77	

* $P > .05$

With df's of 3 and 20, these F values were within the limits expected on the basis of chance. That is, the I. Q.'s and ninth grade first quarter school averages indicated that on these two variables the four groups of six subjects each were drawn from the same population.

Whether or not final school grades for the experimental subjects showed significant improvement when compared with the control subjects became a question of evaluating the significance of the differences between the net changes shown by each experimental group when compared with its control group. The proper statistical handling for studying shifts in a design which involves experimental and control groups has been indicated by McNemar (17). By using a combination of subscripts, 1 and 2 for the pretest and posttest, and E and C to represent the two groups, the means can be specified as M_{1E} , M_{2E} , M_{1C} , and M_{2C} . Then if the change shown by an experimental group is represented by $D_E = M_{2E} - M_{1E}$, and the change shown by a control group is represented by $D_C = M_{2C} - M_{1C}$, the significance of the difference between the two changes, i.e., $D_D = D_E - D_C$ can be determined after the appropriate standard error of D_D ($\sigma_{D_D} = \sqrt{\sigma_{D_E}^2 + \sigma_{D_C}^2}$) has been obtained. In small samples, the best estimate of the sampling error of the difference between the means (D_E or D_C) is found by obtaining the sum of squares of the deviations of the pair differences (D) from the mean differences ($\bar{D}$) divided by the proper df or $N - 1$, where N is the number of differences or the number of paired scores. The square root of this best estimate of the variance of the universe distribution of differences divided by the square root of N (σ_{D_E} or $\sigma_{D_C} = \sqrt{\frac{\sum (D - \bar{D})^2}{N - 1}}$) would then yield the best estimate of the sampling error of D_E or D_C . The t value or D_D / σ_{D_D} can then be computed.

By obtaining t values thus, the significance of the difference in each experimental group's change on the dependent variable, academic success, as compared with the change occurring in its own control group was determined. The

differences observed between the control Ss and the experimental Ss who met on Thursdays (Experimental and Control Group I) and the subjects who met on Saturdays (Experimental and Control Group II) are presented in Table III.

TABLE III
Analysis of the Differences in Academic Success

Group	Mean difference between first quarter and final grades	Standard error of the mean differences	t value
Experimental I	1.00	1.09	.13*
Control I	1.50	3.80	
Experimental II	.83	4.55	1.04*
Control II	6.17	2.30	

* $P > .05$

For Experimental and Control Groups I, with $df=5$, the probability of obtaining by chance a net difference of .50 or a t value of .13, approximates .99. For Experimental and Control Groups II, the probability of obtaining by chance a net difference of 5.34, or a t value of 1.04, is about .35. It cannot be concluded that the experimental groups' interpolated experiences had an effect on school grades when these are measured by the changes in first quarter and final grade averages. As a result of the counseling experience, there was no quantitative evidence of improved academic status for the experimental subjects as compared with the control subjects other than that which might be expected on the basis of chance alone. The very high probability value for the first experimental and control group only serves to confirm this interpretation.

On the other hand, the failure of the counseling experience to yield quantitative evidence of improvement in academic pursuits may be due to other factors. Perhaps the time interval between the counseling experience and the posttest measures of final school grades was too brief. In that event, at a later stage in the counselees' high school training, significant differences between the experimental subjects' shifts in school grades as compared with the

shifts observed in the control subjects would be expected. Moreover, had the counseling sessions been scheduled earlier in the school year, they might have effected improved motivation for academic success. It may be that when counseling occurs later in the year, the backlog of subject matter which has been neglected or only sketchily studied in the various courses creates a barrier or resistance to change, a kind of "deficit" motive, which short-term group counseling fails to counteract.

To examine the validity of the second hypothesis, that a significantly more positive attitude toward school would prevail as a consequence of the counseling process, the changes which occurred in the experimental and control groups' scores on the SOT and the miniature Q-sorts were studied. The responses obtained from two administrations of the SOT were independently scored by three judges on a five point scale: two represented a positive response, four a negative response, and three a neutral or ambivalent response; highly positive and highly negative responses were rated one and four respectively.

In order to obtain sample definitions for each category on this 5-point rating scale, twenty ninth grade boys who were not members of either the control groups or the experimental groups volunteered responses to the SOT. From their completions, the group of judges selected four positive statements which manifestly indicated a satisfactory attitude toward school, four negative statements which manifestly indicated an unsatisfactory attitude toward school, and four statements which were neutral or ambivalent. Intensity differences were clarified by selecting four completions indicative of highly positive and highly negative attitudes toward school. The remaining completions appearing on the protocols of these twenty boys were rated by the judges against the sample completions defining each scale point. Differences occurring among judges were discussed and, for the most part, resolved. Definitions for the samples subsumed under each

point on the rating scale were drawn up (Appendix D). Following this practice with its consequent clarification of the scoring categories, the judges were asked to rate all the SOT responses of the control and experimental subjects. The ratings assigned by each of the judges to all the test items for the control and experimental subjects on both the pretest and the posttest were then inter-correlated. The Pearson product-moment-correlations obtained were large. Since the distribution of sample values of r around the universe correlation is markedly skewed when the population value of r is high, the standard error of r tends to lose its meaning unless an r to z transformation is utilized. Hence this technique was used to ascertain the probability that the reliability coefficients between the judges were significantly greater than zero. The reliability between the judges on the SOT items is presented in Table IV.

TABLE IV
Intercorrelations among Three Judges on SOT Ratings

Judges	r	P
J - 1 J - 2	.91	> .001
J - 2 J - 3	.86	> .001
J - 1 J - 3	.86	> .001

These correlation coefficients are large and highly significant. The average intercorrelation of .88 indicates that 77% of the variance on the SOT responses has been accounted for by the scoring categories defined in the appendix.

Whether the shift in attitude toward school as evidenced by the change in scores from the SOT pretest to the SOT posttest was significantly different for the experimental groups as compared with the control groups was determined by obtaining the appropriate t values. The same statistical methods were utilized

in the assessment of attitude changes as were used to assess changes in academic performance. It should be remarked, however, that the SOT scores for the members of each group represented the subject's total score. Each score represented the average of three different judges' total ratings which were obtained by summing the separate ratings given to each SOT item by each judge. The smaller the total score, the more positive the attitude toward school. The differences between the control and experimental subjects who met on Thursdays (Experimental and Control Group I) and the control and experimental subjects who met on Saturdays (Experimental and Control Group II) are shown in Table V.

TABLE V

Analysis of the Differences in Attitude toward
School as Measured by the SOT

Group	Mean Difference between pretest and posttest scores	Standard error of the mean difference	t value
Experimental I	3.53	1.05	1.20*
Control I	1.90	.82	
Experimental II	.60	.72	.23*
Control II	.80	.51	

* $P > .05$

For Experimental and Control Groups I, with $df = 5$, the probability of obtaining by chance a net difference of 1.63, or a t value of 1.20 is .29. For Experimental and Control Groups II, the probability of obtaining by chance a net difference of .20, or a t value of .23 is .83. In other words, using as criterion for change in attitude toward school a significant pretest posttest shift in the counseled groups' SOT responses as compared with the shift evidenced by the control groups, the investigator found no indication that the counseling process was effective in bringing about an improved attitude toward school. SOT responses provided no quantitative evidence for inferring that the counseling experience fostered a

more satisfactory attitude toward school among experimental subjects than the absence of such an experience produced among control subjects.

A second criterion of attitude change, the miniature Q-sorts, were analyzed next. It had been hypothesized that significant differences would occur when the experimental subjects' pre- and post-counseling results were compared with the control subjects' pre- and post-counseling results. To test this conjecture, the ratings given by all subjects during the pre-counseling and post-counseling test administration to the statements characteristic of overachievers and to the statements characteristic of underachievers were tallied. The total shift in the ratings of overachiever and underachiever items from the pre-counseling to the post-counseling administration was calculated for the Experimental and Control Ss by computing mean ratings assigned to the items discriminating overachievers from underachievers. Shifts in Factor I items, descriptive of diligent students, were scored plus when a post-counseling rating was lower than a pre-counseling rating, and minus when a post-counseling rating was higher than a pre-counseling rating. Shifts in Factor II items, descriptive of inefficient students, were scored plus when a post-counseling rating was higher than a pre-counseling rating, and minus when a post-counseling rating was lower than a pre-counseling rating. For all discriminating items in the miniature Q-sorts, the numerical value of the shifts in ratings could vary from -5 to +5. The t values and the significance of these differences in ratings shown by the Experimental Groups when compared with the differences shown by the Control Groups are summarized in Table VI.

TABLE VI

Analysis of the Differences in Attitude toward School as Measured by the Miniature Q-Sorts

Group	Mean Difference between pretest and posttest scores	Standard error of the mean difference	t value
Factor I			
Experimental I	.25	.28	.27*
Control I	.15	.24	
Experimental II	.20	.27	.29*
Control II	.10	.20	
Factor II			
Experimental I	.33	.27	1.05*
Control I	-.03	.22	
Experimental II	.20	.28	.31*
Control II	.08	.26	

*P > .05

The shifts in scores from the pre-counseling to the post-counseling test administrations for the Experimental Groups were not significantly different from the shifts shown by the Control Groups. The differences in changes shown by the Experimental and Control Groups on items characteristic of overachievers yielded t values associated with a probability level of .80; on items characteristic of underachievers, the t value for Experimental and Control Group I is associated with a probability level of .30; the t value for Experimental and Control Group II is associated with a probability level of .80. Hence, from this second measure of attitude change, miniature Q-sorts, there was no quantifiable evidence of improved attitudes toward school as a consequence of the counseling process. The counseling experience did not so affect the experimental subjects that their attitudes approached those of overachievers more than those of underachievers when compared with control subjects. Any observed differences in rating changes were more readily explained on a chance basis.

Before analyzing the experimental groups' responses to determine whether

their verbalizations about school reflected a more positive attitude during later counseling sessions than was apparent during earlier ones, the counselor's responses were studied. The counselor's orientation was defined as non-directive and the extent to which this role was maintained was determined by dividing the counselor's responses into units and assigning them to one of the twelve categories defined by Bales for the study of counselor activity.

Three independent judges unitized and categorized all the counselor statements for the twelve counseling sessions. Before any judgments were made about the units into which the counselor's responses should be divided or the categories into which these units should be placed, the judges were acquainted with the rules set down by Bales for scoring units (2. p.37) and for judging the counseling process (2. pp. 177-195). Illustrative material presented in his text was carefully studied before scoring any counseling sessions and the judges were practiced in the method. Since they worked from written transcripts while the tapes were being played, there was no time to consider problems of interpretation or to look up definitions. The judges worked under the necessity of immediate decision as they simultaneously unitized and categorized the counselor responses. These two concepts, unit and category, are inseparable, "for the notion of the unit provides the boundaries within which the category is determined" (2.p.36). By scoring them together while the record was being played, the judges approximated more closely the observer's set under scoring conditions for live material. That is, the judges were kept busy with what was going on at the present moment. In general, interaction observers are not required "to keep in mind a logical context of argument which embraces more than the contribution of the last person, or the anticipated reaction of the next person" (2. p.36).

By summing the tallies on the interaction score sheet, the total number of units allocated to the Bales' categories by the three judges for each of the

twelve counseling sessions was determined. The extent of agreement among the judges on the categories used by the counselor was calculated by the Rank-difference Correlation Method. For each of the twelve counseling sessions, three rho values were obtained. The average intercorrelations of the judges on Bales' categories for the twelve sessions are listed in Table VII.

TABLE VII
Average Rho Values Based on 12 Rank-difference Correlations
Obtained from Total Scores of 3 Judges
during 12 Group Counseling Hours

Judges	Average Rho	Rank for 12 correlations
A - B	.80	.67 - .89
B - C	.84	.73 - .97
C - A	.87	.61 - .97

The average reliability among the judges was moderately large but the range of rho values indicated that there was considerable room for improving judgments. On the average, the interjudge agreement accounted for about 71% of the variance.

The amount of time taken by the counselor for each of the counseling sessions was determined by dividing the time used by the counselor by the total time. On the average, the counselor's responses accounted for about 19% of the total activity. Their percentage of counselor responses allocated to each of Bales' categories during counselor activity were obtained by totaling the average number of units assigned to a category by the three judges for each of the twelve counseling sessions, and dividing this sum by the total number of counselor units. The percentages are listed in Table VIII.

TABLE VIII

Percent of Counselor Units Assigned to Bales' Categories during 12 Group Counseling Hours

Cat. No.	Category defined	% Responses
1	Shows solidarity	1.80
2.	Shows tension release	.17
3	Agrees	19 .33
4	Gives suggestion	2 .58
5	Gives opinion	1 .89
6	Gives orientation	68 .04
7	Asks for orientation	4 .64
8	Asks for opinion	.52
9	Asks for suggestion	.86
1 0	Disagrees	.17
1 1	Shows tension	0
1 2	Shows antagonism	0

These results showed that the counselor maintained a non-directive role as nearly as could be approximated in a group situation. Not only was counselor activity less than one-fifth of the total, but also counselor rates were low in all categories except Category 3 and Category 6. Both of these were permitted as strictly consonant with the counselor's defined role.

The third measure of attitude change pertained to Experimental Subjects. During the last three counseling sessions more positive statements and fewer negative statements about school were expected to occur than occurred during the first three counseling sessions. Before statements about school could be identified, however, it was necessary to unitize the responses given by the two groups of six counselees each during their group counseling sessions. Since the concern here was with topical content rather than process content, the judges unitized the written transcripts of the experimental subjects according to the rules set down by Murray (21. p. 26). While there is more agreement than disagreement between Bales and Murray on the problem of scoring units, the disagreement is explainable on the basis of the purpose for which their rules were formulated. A patently incomplete phrase which gives evidence of showing tension

(category 11) or tension release (category 2) is scored a unit on Bales' interaction analysis whereas such an incomplete thought in Murray's content analysis would receive no score. Conjunctival sentences are also scored differently. If a series of predicates are asserted of a single subject, Bales gives a separate score for each additional predicate whereas Murray would score such a sentence as one unit. Since the positive or negative attitude implied in topical statements about school was our primary concern in this study, the units scored for content by Murray were more appropriate than those defined by Bales for interaction process analysis.

Therefore, using Murray's set of instructions for unit scoring, two judges unitized the experimental subjects responses for a one hour counseling session. After each unit on the written record of the counseling hour, two judges (Judge A and Judge B) made a stroke and scores for successive five minute intervals of the counseling hour were compared. As a result of discussing differences in the unitization of the counselees' responses after each five minute interval, a gradual increase in the number of exact agreements on the number of units scored was apparent. One of the judges who worked on this first counseling hour and another judge (Judge C) who was unpracticed in applying Murray's instructions for unit scoring unitized the record of another one hour counseling session which had been divided into successive five minute intervals. Again results were compared and the extent of agreement between Judge A and Judge C was determined. The results obtained from following this procedure are presented in Table IX.

TABLE IX

The Scoring of Counselor-Content Units for
Two Counseling Sessions by Three Judges

No. of units a given set of words was divided into by ---		Successive Five Minute Intervals of One Counseling Session											
Judge A	Judge B	1	2	3	4	5	6	7	8	9	10	11	
1	6	1*	0	0	0	0	0	0	0	0	0	0	
1	5	0	1	0	0	0	0	0	0	0	0	0	
1	4	3	2	3	2	0	0	1	0	0	0	0	
1	3	2	4	1	0	3	1	0	2	1	2	1	
1	2	7	8	2	2	3	4	3	1	2	0	2	
1	1	34	59	24	40	45	36	50	30	35	23	55	
2	1	8	5	4	3	2	2	0	2	1	1	2	
3	1	1	0	0	1	3	0	2	0	1	2	0	
4	1	0	1	2	0	0	1	0	1	0	0	0	
Total instances		56	80	36	48	56	44	56	36	40	28	60	
% of exact agreement		.61	.74	.67	.72	.80	.82	.89	.83	.87	.82	.92	
Total units, Judge A		66	88	46	53	64	49	60	41	43	33	62	
Total units, Judge B		81	106	49	56	65	50	62	41	44	32	64	
* To be read: There was 1 instance during the first 5-minute interval when Judge A scored a subject's verbalization as 1 unit and Judge B scored the same subject's verbalization as 6 units.													
Judge A	Judge C	1	2	3	4	5	6	7	8	9	10	11	12
1	5	0	1	0	0	0	0	0	0	0	0	0	0
1	4	0	0	1	0	0	0	0	0	0	0	0	0
1	3	1	0	0	0	1	0	0	1	0	0	0	0
1	2	1	1	0	2	1	2	2	1	2	1	1	1
1	1	35	36	40	44	38	39	43	37	35	40	48	42
2	1	2	3	3	1	2	2	2	2	2	1	2	0
Total instances		39	40	44	47	42	43	47	41	39	42	51	43
% exact agreement		.90	.90	.91	.94	.90	.91	.91	.90	.90	.95	.94	.97
Total units, Judge A		41	44	47	48	42	45	49	43	41	43	53	43
Total units, Judge C		42	41	47	49	40	45	49	38	41	42	54	43

Murray has observed the difficulty of expressing the agreement between judges statistically "since there is not total number of units known beforehand. However, one way of treating the results is to assume that strokes could be put after every word. One may then determine the number of words after which both scorers put strokes, the number after which only A put a stroke, the number after which only C put a stroke, and the number after which neither put a stroke (21)." The resulting 2 x 2 table yielded a phi coefficient of .95. The chi square, corrected for continuity, that was associated with this value was 5551.12 which greatly exceeded the .001 level of significance.

Judge A and Judge C unitized the remaining ten counseling sessions since Judge C's scores were more consistent with Judge A's than were Judge B's. The three judges then collaborated in judging the content of the boys' responses during the two counseling sessions which had been used to examine the reliability of unitization procedures. For the counseling session unitized by Judges A and B, Judge A's units were the ones studied for content; for the counseling session unitized by Judges A and C, Judge C's units were the ones studied for content. Whether or not a response unit reflected attitude toward school, i.e., attitude toward teachers, studies and / or future goals which put a premium on intellectual activity, was the first decision made by the judges. If at least two judges agreed that the content of a unit reflected attitude toward school, the unit was then scored positive (plus one), negative (minus one), or neutral (zero).

As a consequence of questions and discussions evoked by this procedure, a rather loose set of "rules" was formulated for the purpose of identifying units which reflected a positive, negative, or neutral attitude toward school, and a sample of units whose content had been scored was selected for illustrative purposes. These sample items (Appendix C) served as the judges' criteria for scoring the response units of the other ten counseling sessions.

In establishing the scoring criteria, the judges noted that in some units

which expressed attitude toward school, the speaker was simply quoting or paraphrasing material given in the disguised case without indicating his own attitude toward the material. Other units were concerned with school, but the content gave information without including an expression of attitude. These two kinds of content were considered neutral and scored zero. Whenever the speaker expressed his own opinion about an attitude described in a case, or gave his opinion about units of information concerned with school, a score of plus or minus one was assigned. Units categorized under the following headings were scored plus one: (1) an action unit - one which advocates a positive approach toward the solution of a school problem; (2) a reason unit - one which advances a logical reason for maintaining a positive attitude toward school; (3) an inference unit - one which implies a favorable attitude toward school; (4) a satisfaction unit - one which explicitly states the existence of a favorable attitude toward school; (5) an acceptance unit - a unit in which one group member agrees with another group member's positively scored statement; (6) a rejection unit - a unit in which one group member disagrees with another's negatively scored statements. If statements expressing attitude toward school had an affective tone in the opposite direction from that described in the six categories just mentioned, the units were scored minus one. A few miscellaneous statements pertaining to school which could not be readily assigned to any one of these five categories were evaluated by the judges on the basis of their general positive or negative quality.

From these judgments it was possible to obtain four scores for each of the twelve experimental subjects from each of these judges. These scores included the number of positive statements made during the first three and during the last three of the counseling sessions, and the number of negative statements made during the first and the last half of the counseling sessions. The Rank-difference Correlation Coefficients between the judges on these scores were then computed. The average intercorrelations of the judges for the four sets of scores assigned

to each of twelve boys are listed in Table X.

TABLE X
Average Rho Values Based on Four Rank-difference Correlations
Obtained from 4 Subscores of 3 Judges
for 18 Experimental Subjects

Judges	Average Rho	Range for 4 Correlations
A - B	.89	.86 - .93
B - C	.87	.84 - .89
A - C	.89	.85 - .93

The average reliability among all the judges was .88; interjudge agreement accounted for about 77% of the variance.

On the third measure of attitude change, it was expected that the experimental subjects would express a significantly larger number of positive statements and significantly fewer negative statements during the last half of the counseling sessions than during the first half. In calculating the mean number of positive or negative responses during half the counseling sessions, the score for each experimental subject was the average of the scores assigned by the three judges. For Experimental Groups I and II, the significance of the difference between the average number of expressions of a positive attitude toward school for the first three and the last three counseling hours was determined by means of the t test. A similar procedure was followed for verbalized attitudes which were negative. The results are tabulated below.

TABLE XI
Analysis of the Differences in Attitude toward School
as Measured by Comparing Responses from the first
Half and the End Half of the Counseling Sessions

Group	Mean no. responses 1st half	Standard deviation	Mean no. responses End half	Standard deviation	t value
Positive Statements					
Experimental I	81	97.61	73	78.33	.05*
Experimental II	86	81.48	94	66.79	.00*
Negative Statements					
Experimental I	67	61.17	48	39.30	.29*
Experimental II	16	12.41	14	4.90	.14*

*p > .05

For the two experimental groups, the number of positive and negative statements of attitude toward school which occurred during the early counseling sessions did not differ significantly from the number of positive and negative statements of attitude toward school which occurred during later counseling sessions. The probability of explaining all differences on a chance basis was markedly high; with df equal to 5, the P values ranged from .78 to .96.

It was also apparent from Table XI that the individual subjects in both groups revealed great variation with respect to the number of attitudinal expressions; all the standard deviations were large. Moreover, the number of positive statements greatly exceeded the number of negative statements, and the difference was more noticeable for Experimental Group II. No ready explanation for this outcome suggested itself.

However, in an attempt to offer tentative reasons for negative outcomes on this third measure of attitude change, each subject's responses during the counseling session in which the disguised case was the subject's own were compared with his responses for the other five counseling sessions. In general, it seemed that the subjects were least cooperative when their own cases were under discussion. One suspects that, in reading about a disguised case, a subject semiconsciously reflects on his own life as he reads about another's. When the disguised case focusses attention on the subject's characteristic shortcomings, if he has unwittingly identified himself with the case, he tends to be more or less resistant to direct criticism offered by peer group participants. This resistance seemed to show itself in different ways: during the counseling sessions which revolved around their own cases, three subjects were credited with a highly negative attitude because of the number of positive attitudinal statements which they rejected; during the other five counseling sessions, their attitudes were more positive. Four subjects who were usually outspoken and ready to participate in the group counseling sessions in which the disguised cases of other members were under discussion appeared reticent when their own cases were being considered; in these

instances, a reduced number of verbal units were recorded during the counseling session. Furthermore, although the experimental members were not told that each disguised case was earmarked for one of the group members, four subjects - two from each experimental group - expressed their suspicions that there were resemblances between the cases and themselves.

This differential effect of the disguised cases was not expected, but a posteriori conclusions suggest the need for overcoming this resistance if it really exists. This might be accomplished if the group sessions were followed by an individual counseling session during which the counselor would center attention on the contributions made to the solution of the client's disguised case by his peer group members. In their absence, the client might let down his defenses and perceive his problem as others perceive it.

On the other hand, there seems to be reason to hypothesize that individual counseling or guidance directed toward acquainting the client with his abilities, aptitudes, and interests, and helping him to assess his goals and aspirations could be a profitable experience and could lead to an improvement in school grades. The experimental subjects seemed to be lacking evidence of the fact that they were bright. Members of both experimental groups reiterated at every counseling session their conviction that guidance and / or counseling services should be sought by those having academic problems. Experimental subjects manifested a need and a strong desire for information about ability, aptitudes, interests, and goals; they wanted an opportunity to assess their own post high school plans. The value of such information has been pointed up by Outts and Moseley (6. p. 136): the bright underachieving adolescent who knows that he has high intellectual potential will feel challenged to accept the responsibility for developing it.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the effectiveness of a modified counseling procedure in promoting learning among bright underachieving adolescents. From seventeen high schools in the greater Boston area, the twenty-four boys who showed the most marked discrepancy between ability and achievement at the end of the first quarter marking period in grade nine were identified and divided into two control and two experimental groups of six members each. No group had more than one member from the same school; all the boys had an I. Q. of 125 or over; all were stable personalities; every participant had a school average below 75 percent.

From responses to such instruments as the Biographical Inventory, the Kuder Preference Record and the California Test of Personality, data were procured for writing twelve case studies which highlighted the problem of educational underachievement and also delineated the more outstanding traits of the experimental members. These disguised case studies then became the pivotal point of discussion for the experimental group during six one-hour counseling sessions which were scheduled for successive weeks of February and March 1957. During all these sessions, the counselor maintained as non-directive a role as could be approximated in a group situation, thus affording the experimental members maximum opportunity to ferret out the problem in each disguised case, to diagnose the failures, and to plan remedial measures. The extent to which solutions offered by peer group participants were accepted and translated into action by the experimental members for whom they were earmarked was measured by comparing the differences between pre- and post-counseling test results for the experimental groups with the differences between pre- and post-counseling test results for the control groups who had not been exposed to the counseling experience.

The expectation that significantly greater changes would occur among experimental subjects than among control subjects when differences between first

quarter and final marks in grade nine were compared was not confirmed. Moreover, shifts in attitude toward school as measured by the pre- and post-counseling differences on the Sentence Completion Test and the miniature Q-sorts were explainable on a chance basis. Similarly, the counselees' own expressions of attitude as measured by the number of positive and negative statements occurring at the beginning and at the end of counseling showed no statistically significant changes.

Although the measures used in this study suggested that a predominantly non-directive orientation is ineffective in promoting learning among bright underachieving ninth grade boys, it is still possible that factors inherent in the experimental design obscured evidence of academic gains. It would seem important for future investigators to give consideration to the effects of the time variable. Content analyses of the electrically recorded interviews of the counselees pointed up the fact that, in view of the backlog of learning which had not been studied sufficiently, it seemed relatively futile to the counselees to attempt improving freshman academic status in March. Had counseling sessions occurred earlier, it is conceivable that the experimental members might have assumed an attitude toward school which resembled more closely that of over-achievers, and consequently, significantly marked academic improvement might have resulted. On the other hand, it is possible that observable changes could occur at a later time. If so, at the end of the sophomore year, the experimental subjects may still show a significantly greater change in grade point averages than the control groups.

To date, however, it appears that disguised case studies in conjunction with Rogerian counseling techniques yield no positive answers to the question: How can bright underachievers be motivated to realize their full intellectual potential? Yet, a posteriori considerations suggest alternative methods of approach which may be fruitful.

Since the experimental members appeared to identify with their own disguised cases, group counseling sessions directed toward the solution of such cases seemed to provide a beginning step in assisting underachievers to perceive themselves as their peers perceived them. But since the experimental members gave evidence of ego-defensiveness when their own cases became the focal point for discussion, they tended to offer resistance to recommendations made by peers; hence, an individual follow-up interview between the counselor and each counselee would probably enable the counselee to let down his defenses and gain insight more readily than he would be likely to do if he continued to meet with peer members. Furthermore, analysis of the content of the experimental members' verbalizations during the group counseling sessions revealed the need for information about the self; therefore, to render the individual interview most effective, the counselor should assume a somewhat more active role by providing the counselee with desired information concerning his own ability, aptitudes, interests, and goals. This study, then, leads to the conjecture that non-directive group counseling sessions centered upon the study of disguised cases, when supplemented by an individual interview in which the counselor assumes a more directive role, will foster improved attitudes toward school and higher school grades among bright underachieving ninth grade boys. }

APPENDIX A

AN ILLUSTRATIVE DISGUISED CASE

Case of Henry M.:

By January 1957, Henry M., a tall, well-built, sandy-haired youth of fourteen years had completed half a school year as a college preparatory freshman in a high school somewhat local to his home. Although Henry was an intelligent boy, over 130 I: Q. (1), he was doing poorly in school. In fact, by the end of the first term, Henry's marks indicated that he had failed two major subjects. Since ability was not lacking, the cause of these poor school grades was not easy to discover.

It did not seem that Henry's life lacked direction; long terms goals were quite well formulated. Henry's ambition was to become a design engineer (2) or a mechanical engineer (3). In view of Henry's keen interest in everything scientific (4) or artistic (5), his aspirations seemed reasonable and his parents were pleased at these vocational choices. They never doubted about his future; they felt that Henry would be successful (6). But on other points, Henry was at variance with his parents (7), especially concerning the importance of freshman grades in high school. His parents overstressed marks (8); Henry thought them unimportant (9). Whether he missed the honor roll or made it was of little consequence to him but of major concern to his parents.

Sometimes one wondered if this indifference about marks was a natural consequence of having too many avocations. Baseball was one of Henry's favorite sports (10). Yet Henry felt that sports could consume precious hours which could be used for study. Henry also liked modeling (11); boats (12) and jet planes (13) in particular fascinated him; all this sort of activity took a great deal of time (14). Then, too, Henry had extracurricular pursuits at school which required time and effort. Attending school dances (15) and sports contests (16) were considered important. Similarly, debating had much to offer for the student, and Henry engaged in this activity (17). Henry wondered if these activities should be continued if one's academic record was weak.

In an attempt to account for Henry's underachievement in school, another facet of Henry's life was also considered: the fact that Henry did not like both parents equally (18), and that the folks often differed from him regarding the things he liked (19). They wanted him home all the time, but he usually wanted to be somewhere else than at home (20). On homework, Henry could just persevere for an hour each night (21); on this, his parents never felt it their business to check him (22). On the whole, Henry's parents were uncritical (23) and congenial (24), and the family members had good times together. (25)

In school, Henry did not feel too important (26); at times, he felt that his teachers did not want him in class (27). If it were right, Henry would stay away from school as much as possible (28). But teachers were not the only ones who lacked understanding. He felt his closest friends understood him; (29) sometimes his classmates seemed so unkind and unfriendly, though, that he avoided them (30). Yet his friends also thought he had likeable traits (31), and they usually gave him credit for the good judgment that he showed (32).

Henry's own personality might also be a reason for his school failure. He acknowledged finding it hard to work when he did not receive the necessary encouragement (33), but in many areas outside of school, he did things that were good for him, even if he did not want to (34). He also felt restricted in that he could not bring his friends home freely (35). He was not allowed to say what he believed about things (36). He didn't feel that he was given enough liberty to do what he wanted to do (37).

Occasionally when Henry thought longingly of his future plans - being an engineer (38), working on the development of lighter and stronger metals (39), inventing (40) - he wondered if there was any way he could insure the realization of his dreams. What would you say?

COMPOSITION OF THE DISGUISED CASES

The initial paragraph of each case study was introductory in nature. Its main function was to provide a picture of a ninth grader who was well-endowed intellectually, but unsuccessful so far as scholastic pursuits were concerned. To help the person for whom the case was designated to perceive similarities between himself and the disguised case, a few descriptive notes about the general appearance, intelligence, and achievement of the subject of the case were included.

The next part of each case named the subject's highest interests as measured by the Kuder Preference Record; this included interest scores at the 75th percentile and beyond. Mention was also made of the subject's aptness for one or two occupations at the professional level which would be likely choices in view of his interest pattern. From occupations listed in the Examiner Manual (16), preference was shown for those occupations which coincided with or seemed to approximate the responses given by the subject to the questions on the Biographical Inventory concerned with future plans. In most instances, expressed plans were in agreement with measured interests. Facts about school which had been ascertained from prior testing and which threatened the realization of the subject's occupational goals were also added.

In the third section of each disguised case, the kinds of extracurricular activity engaged in at school and outside of school were described. Written into the case was the question of the extent to which these undertakings might interfere with scholastic achievement.

The next section described the relationship of each subject to his family generally, and to his parents specifically. Positive and negative aspects of these relationships were indicated, and the question of whether these attitudes affected school achievement was given expression.

With respect to attitude toward school, only negative statements were included. By emphasizing the negative aspects of the subject's attitude toward school, and by questioning the possibility that other aspects of the subject's life could provide partial explanation for a poor academic record, it was hoped that the reader's attention would be focussed on the problem of scholastic underachievement.

Attitudinal statements, positive and negative, about personal and social relations were culled for the disguised cases. The majority of these statements were selected from the personal and social adjustment scales of the C. T. P. on which the subject obtained the lowest and the highest scores.

In the concluding section of the case, the goals of the subject and two or three interest items which supported the subject's goal choices were enumerated in the hope that discussion would revolve around the attainment of desired goals rather than their abandonment because of academic problems.

From the California Test of Personality (C), and the Kuder Preference Record (K), and the Biographical Inventory (B), forty items characteristic of the person tested were selected. Fifteen items had reference to goals and ambitions and interests; ten items, five positive and five negative, pertained to the home situation; five negative items reflected attitude toward school; ten items, five positive and five negative referred to classmates and personal-social adjustment. In

the sample case, these items were numbered in the order in which they were incorporated into the disguised case. The item numbers are repeated below and followed by the notation B, C, or K to indicate the test instrument from which the item was abstracted; the number of the item as it appears in the California Test of Personality Adjustment or the Kuder Preference Record is also listed. Lastly, the affective tone of the item and the area of personality which the item purported to describe are indicated.

TABLE XII

No. of item in case	Test	No. of item in test	Item description	Affective tone
1	OTMM		Personal-social	Positive
2	K	6P	Ambition	
3	K	7T	Ambition	
4	K		Interest	
5	K		Interest	
6	C	142	Home	Positive
7	C	141	Home	Negative
8	B		Home	Negative
9	B		School	Negative
10	B		Interest	
11	K	7r	Interest	
12	K	6a	Interest	
13	B		Interest	
14	B		Interest	
15	B		Interest	
16	B		Interest	
17	B		Interest	
18	C	144	Home	Negative
19	C	141	Home	Negative
20	C	145	Home	Negative
21	B		School	Negative
22	B		Home	Positive
23	C	145	Home	Positive
24	C	136	Home	Positive
25	C	137	Home	Positive
26	C	46	School	Negative
27	C	47	School	Negative
28	C	154	School	Negative
29	B		Personal-social	Positive
30	C	164	Personal-social	Negative
31	C	24	Personal-social	Positive
32	C	29	Personal-social	Positive
33	C	7	Personal-social	Negative
34	C	8	Personal-social	Positive
35	C	43	Personal-social	Negative
36	C	36	Personal-social	Negative
37	C	36	Personal-social	Negative
38	B		Interest	
39	K	38	Interest	
40	K	6Q	Interest	

APPENDIX B

BIOGRAPHICAL INVENTORY

Home

Name _____ Mother's name _____
 Address _____ Mother's occupation _____
 Birthdate _____ Father's name _____
 Relationships with parents _____ Father's occupation _____
 Language spoken in home _____

School

School history _____
 Grade liked best - reason (s) _____
 Grade liked least - reason (s) _____
 School subject liked best - reason (s) _____
 School subject liked least - reason (s) _____
 Time allotted to home study _____
 Extent of supervision _____

Use of free time

Activity _____
 Hobbies _____
 How developed _____
 Outside work _____
 Home duties _____
 Books read recently _____
 Usual associates _____

Early memories

Three happiest memories _____
 Three most painful memories _____

Future Plans

Plans five years hence _____
 Three wishes _____

Significant personal problems

Date _____
 Examiner _____

APPENDIX C

Illustrative Statements Used to Score Attitude toward School as Expressed by Experimental Subjects during Group Counseling Sessions

Attitudinal units abstracted from the first two counseling sessions served as samples for scoring the units of the remaining ten counseling sessions. The end of a unit was indicated by a stroke, and also by a single or two-place number. The first number indicated the direction (positive, negative, neutral) of the response; the second indicated the kind of unit represented (p. 33). No second number appeared for neutral responses which paraphrased material from the disguised cases or gave information about the attitude of others. Since the meaning of a single unit was sometimes lost when taken out of context, the samples illustrative of a single kind of unit were not grouped.

- E. *It says that he spends about an hour on homework. (0)/ That proves to us that he is still serious enough, (12)/ and he's still, in a way, wanting to get ahead. (12)/
- E. Well, it says here that he doesn't want to go to college, (0)/ but that he does want to go into architectural work. (0)/ Well, that's very foolish actually. (16)/ He'll have to go to college to be in architecture, (12)/ or just amount to nothing. (13)/
- E. Isn't it natural that you really don't feel, you know, that you trust the teacher, (-12)/ or that you really don't like her, (-12)/ kind of because you flunked? (-12)/
- E. And he's going to have to find out sooner or later (0)/ that if he's going to be an engineer he's going to have to take math. (12)/ He's really got to study math. (11)/
- E. As I said before, a counselor could do him a great deal of good, (11)/ because he could find out that different subjects were required, (12)/ and that they were important. (12)/
- E₁ He'll have to prepare for it. (11)/ That's what you do when you go to college. (12)/
- E₂ You also learn on the job. (-13)/
- E. Flimsy marks in high school won't get you anyplace. (13)/
- E. His friends could push him to study more, too. (11)/ And he needs more follow-up or help in school. (11)/
- E. It says that he doesn't lack the funds, (0)/ and that he has the I. Q. to go to college, (0)/ but it says he doesn't want to go. (0)/ I don't think it would be right to force him to go. (-11)/
- E. He gets poor grades in high school, so he'll get poor grades in college, too. (-12)/. To me it would be a waste of time and money. (-13)/
- E₁ The problem is: "Why doesn't he want to go to college?" (13) He's fortunate enough to have enough ability, (12)/ and if he'll just level down. (11)/ I mean, why give up a sinking ship that's got so much promise? (13)/
- E₂ That sounds good. (15)/ I think you're right. (15)/
- E₁ You know what I think this fellow should do though? (0)/ Take an aptitude test. (11)/
- E₂ No. (-16)/ Not an aptitude test. (-15)/
- E₃ That way they could find a person who held promise but wasn't coming through, (11)/ and they could have some kind of experienced person to aid them and to counsel them. (11)/
- E₁ He shouldn't give up so easily. (11)/ Once you're tackled you don't say: "I quit." (12)/
- E₂ Sometimes I do. (-16)/ In school...
- E₃ That's not usual. (16)/ Most of us don't. (16)/

* Experimental subject

- Q. Freshman year is the best year; (14)/ I think it's the foundation year. (15)/
You can get a good foundation for everything in the ninth grade. (14)/ So if
you do work reasonably hard in the ninth grade, then at least you've got the
basis for something. (15)/
- Q. Freshman year is not that important. (-15)/
- Q. Not to concentrate when he is doing homework is a waste of time for him. (15)/
If he had someone to do his homework with, I think it would help him. (11)/
- Q. Yes. (15)/ Because he'd have a better spirit then. (15)/
- Q. One thing he could plan to do is leave school at sixteen and get a job. (-11)/
If that's the way he's going to be happy. (-15)/ I think that's the thing for
him to do. (-11)/
- Q. Yes. (-15)/
- Q. They should tell him he's intelligent. (11)/ If they told him and he knew it,
(15)/ he'd try. (15)/
- Q. That reminds me of my school. (-15)/ There's too much drill. (-11)/ I get
sick of it, (-14)/ and I daydream or sleep. (-11)/
- Q. My friend and I like to do our homework together. (14)/ I mean, like when we
go to do Latin, he might do the verbs, (0)/ and I'll do nouns or adjectives
(11)/ I'm good on nouns and adjectives. (14)/ We both learn, (15)/ and we
both get along good together. (14)/

Interviewer: ... studies, school efforts to increase social skills and a positive
in intellectual activity.

Sample: a. My teacher ... is pleasant.

b. I find that homework ... is necessary for me.

c. Before examinations ... I try to study hard.

d. Latin class ... is enjoyable.

Notes: 1. The interview was conducted separately. Several responses include personal
statements about school which do not seem to reveal the respondent's
attitude.

Sample: a. My high school work ... is a college preparatory
course.

b. English class ... is not everyone's cup of tea.

[If directions for the administration of the RCT are
carefully followed and followed, such responses
will not occur.]

Interview responses include statements in which positive
and negative attitudes are reflected, i.e., a highly positive and a
highly negative attitude are indicated.

APPENDIX D

The definitions for the scoring categories used by the three judges who rated the SOT items and some sample completions for each score value follow.

Score +1 highly positive responses, i.e., statements which manifest marked satisfaction with teachers, studies, school effort or future goals which put a premium on intellectual activity.

Examples: a. The thought of books... is especially pleasant to me since I like to read very much.

b. My high school course ... is most satisfying to me.

c. My algebra class ... is my favorite one.

d. My teacher ... is most willing to help me in all ways.

Score +2 positive responses, i.e., statements which manifest satisfaction with teachers, studies, school effort or future goals which put a premium on intellectual activity.

Examples: a. My teacher ... is pleasant.

b. I feel that homework ... is necessary for me.

c. Before examinations ... I try to study hard.

d. Latin class ... is enjoyable.

Score +3 neutral and ambivalent responses. Neutral responses include factual statements about school which do not seem to reveal the respondent's attitude.

Examples: a. My high school course ... is a college preparatory course.

b. English class ... is one everyone must attend.

(If directions for the administration of the SOT are correctly understood and followed, such responses will not occur.)

Ambivalent responses include statements in which equally positive and negative attitudes are reflected, i.e., a highly positive and a highly negative attitude are combined.

Example: a. My algebra class ... is my favorite one but I find the subject very difficult.

Or a positive and negative attitude are combined.

Example: a. When I study ... I stick to it, but I have trouble concentrating.

When a highly positive attitude is combined with a negative attitude, the statement is scored 2; similarly, when a highly negative attitude is combined with a positive attitude, the statement is scored 4.

Score + 4 negative responses, i.e., statements which manifest dissatisfaction with teachers, studies, school effort or future goals which put a premium on intellectual activity.

Examples: a. After history class ... I feel relieved because it's over.

b. In school ... I fool around a little.

c. Before examinations ... I cannot bring myself to study.

d. The thought of books ... bothers me sometimes.

Score + 5 highly negative responses, i.e., statements which manifest marked dissatisfaction with teachers, studies, school effort or future goals which put a premium on intellectual activity.

Examples: a. When I study ... I always have so many distractions that I quit.

b. English class .. is very frightening to me because I do not like oral work.

c. I feel that homework ... is very bothersome.

d. My high school course ... is very disagreeable to me.

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